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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,712	05/24/2004	Nien-Hui Hsu	OTMP0080USA	3711
27765	7590	06/22/2005	EXAMINER	
NORTH AMERICA INTERNATIONAL PATENT OFFICE (NAIPC)			BLACKMAN, ROCHELLE ANN J	
P.O. BOX 506			ART UNIT	PAPER NUMBER
MERRIFIELD, VA 22116			2851	
DATE MAILED: 06/22/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/709,712

Applicant(s)

HSU ET AL.

Examiner

Rochelle Blackman

Art Unit

2851

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Specification***

The disclosure is objected to because of the following informalities: on pg. 9, paragraph [0023], line 4, "filter 2331" should be - filter 2311- - as it is referenced in FIG.

4. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Miyamoto et al. (U.S. Patent No. 6,443,575).

Regarding claim 1, Miyamoto discloses a cooling structure (see FIGS. 1-22) for a projection apparatus, comprising: a housing (see FIGS. 2-4 and 16); and at least one partition (see "partition" formed by elements 20 and/or 10 in FIGS. 20 or 21), installed in said housing to form a double-layer structure of a first zone (see airflow arrows in element 2 of FIGS. 20 or 21) and a second zone (see airflow arrows near element 3 in FIG. 20 or 21 or see airflow arrows in element 10 in FIG. 21), and at least a first air inlet (see airflow arrow near element 25 in FIGS. 20 or 21) disposed at the lower part of said first zone, at least a second air inlet (see area of 42 near element 42b or area of 47 near

Art Unit: 2851

element 54 where curved airflow arrow is exiting and going in the direction of element 3 in FIGS. 20 or 21 or see area of 47 near element 47b where curved airflow arrow is exiting and going the direction of element 12 and 13 in FIG. 21) disposed between said first zone and said second zone and a turning angle (see "angle" formed by the above-described "first air inlet" and "second air inlet") existing between said first air inlet and said second air inlet.

Regarding claim 2, Miyamoto discloses a fan (see 11 of FIG. 21), installed in said second zone (this would be the airflow arrows inside of element 1 in FIG. 21, as described above as the "second zone"), used for drawing outside air into said housing through said first air inlet, and said air being entered said second zone through said second air inlet after being turned.

Regarding claim 3, Miyamoto discloses wherein a guide plate (see 54 of FIG. 21) is installed at the exit of said second air inlet to guide airflow to elements needed to be cooled.

Regarding claim 4, Miyamoto discloses wherein a plurality of sound sources (see 11-13 of Fig. 21) is included in said second zone, said sound source is an optical engine or a fan (see 11 of FIG. 21).

Regarding claim 5, Miyamoto discloses wherein an air outlet (see area of element 10 where arrows exiting near "fan" 11 in FIG. 21) disposed at said second zone and an air-guiding duct (see 10 and 47 of FIG. 21) is installed in front of said air outlet.

Regarding claim 6, Miyamoto discloses wherein a curved air flowing path (see curved arrows inside "air-guiding duct" 10, 47 in FIG. 21) is disposed in said air-guiding duct.

Regarding claim 7, Miyamoto discloses wherein at least one baffle (see 54 of FIG. 21) is installed in said air-guiding duct.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-6, 8, and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Yamada et al. (U.S. Patent Application Publication No. 2003/0189694).

Regarding claim 1, Yamada discloses A cooling structure for a projection apparatus (see FIGS. 1-14), comprising: a housing (see 1, 40 of FIGS. 6 and 13); and at least one partition (see top section of element 92 in FIGS. 6 and 13), installed in said housing to form a double-layer structure of a first zone (see area inside of element 92 containing airflow arrow 512 in FIG. 13) and a second zone (see area inside element 94 and areas containing airflow arrows 512 and 514 in FIG. 13), and at least a first air inlet (see 132L in FIGS. 6 and 13) disposed at the lower part of said first zone, at least a second air inlet (see area where curved or turning airflow is disposed between elements

Art Unit: 2851

93 and 92 in FIG. 13) disposed between said first zone and said second zone and a turning angle (see "turning angle" formed by "first air inlet" 132L and the above-described "second air inlet") existing between said first air inlet and said second air inlet.

Regarding claim 2, Yamada disclose a fan (see 521, 523 in FIG. 13 and 526 of FIG. 12), installed in said second zone, used for drawing outside air into said housing through said first air inlet, and said air being entered said second zone through said second air inlet after being turned (also see "turning angle" formed by "first air inlet" 132L and the above-described "second air inlet").

Regarding claim 3, Yamada discloses wherein a guide plate (see 93 and 94 of FIGS. 6 and 13) is installed at the exit of said second air inlet to guide airflow to elements needed to be cooled.

Regarding claim 4, Yamada discloses wherein a plurality of sound sources (see 44 of FIG. 12 and 512, 521, 523 of FIG. 13), is included in said second zone, said sound source is an optical engine (see 44 of FIG. 12 and 512 of FIG. 13) or a fan (see 521, 523 of FIG. 13).

Regarding claim 5, Yamada discloses wherein an air outlet (see 132R of FIGS. 6 and 13) is disposed at said second zone and an air-guiding duct (see 91 of FIG. 12) is installed in front of said air outlet.

Regarding claim 6, Yamada discloses wherein a curved air flowing path (see curved airflow arrow 513 in "in FIG. 12) is disposed in said air-guiding duct.

Regarding claim 8, Yamada discloses wherein a duct (see 91, 512, and 514 of FIGS. 12 and 13) formed by a plurality of printing circuit boards (see 301, 303, 304 of FIGS. 8, 12, and 13) is disposed at the exit of said second air inlet, and heat elements (see 44, 301, 303, 304, and 411 of FIGS. 8, 12, and 12) are installed inside of said duct.

Regarding claim 9, Yamada discloses wherein a filter (see 135 of FIG. 6) is installed at said first air inlet.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hsu et al. (U.S. Patent Application Publication No. 2003/0179579), cooling apparatus for projector.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rochelle Blackman whose telephone number is (571) 272-2113. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571) 272-2258. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RB

  
**JUDY NGUYEN**  
**SUPERVISORY PATENT EXAMINER**